

REMARKS

By this Response, Applicants have canceled claims 47, 49, 60, and 62 without prejudice or disclaimer, and amended claims 32 and 50. Support for the amendments to claim 32 may be found at least at claims 47 and 49 (prior to cancellation), and at page 5, lines 17-20, of the originally-filed application. Claim 50 has been amended such that it depends from claim 32 in view of the cancellation of claim 49. Thus, no new matter has been added. Claims 32-46, 48, 50-59, and 61 are pending on the merits.

I. Statement of Substance of Interview Conducted on June 16, 2008

During the telephone interview conducted on June 16, 2008, Examiner Crane indicated that the Office Action mailed May 30, 2008, is a final Office Action. No other substantive issues were discussed during the interview.

II. Claim Rejection under Section 102(b) Based on Gerspacher

In the final Office Action, claims 60 and 62 were rejected under 35 U.S.C. § 102(b) based on U.S. Patent No. 4,143,209 to Gerspacher et al. ("Gerspacher"). Although Applicants continue to disagree with this rejection for at least the reasons outlined in the Applicants' Amendment filed on March 5, 2008, Applicants have canceled claims 60 and 62 without prejudice or disclaimer. Therefore, Applicants respectfully request withdrawal of the rejection of claims 60 and 62 under § 102(b) based on Gerspacher.

III. Claim Rejection under Section 102(b) based on Sawada

Claims 60 and 62 were rejected under 35 U.S.C. § 102(b) based on U.S. Patent No. 4,859,811 to Sawada et al. ("Sawada"). Although Applicants do not agree with this claim rejection, Applicants have canceled claims 60 and 62 without prejudice or disclaimer. Therefore, Applicants respectfully request withdrawal of the rejection of claims 60 and 62 under § 102(b) based on Sawada.

IV. Claim Rejection under Section 103(a) based on Gerspacher and Sawada

Claims 32-62 were rejected under 35 U.S.C. § 103(a) based on Gerspacher in combination with Sawada. Claim 32 is the only independent claim included in this claim rejection, and Applicants have amended independent claim 32. Applicants respectfully request reconsideration and withdrawal of this claim rejection because Gerspacher and Sawada, regardless of whether they are viewed individually or as a whole, fail to disclose or render *prima facie* obvious all of the subject matter recited in independent claim 32.

Applicants respectfully submit that (1) the rejection statement's proposed, hypothetical combination of the Gerspacher and Sawada references fails to result in disclosure of all of the subject matter recited in Applicants' amended independent claim 32, (2) Gerspacher teaches away from the rejection statement's proposed, hypothetical modification to Gerspacher based on Sawada, and (3) an ordinary artisan in Gerspacher's art relating to wire reinforcement of tires would not look to Sawada's art relating to high quality electrical conductors for use in magnetic coils, acoustic- and

image-forming appliances, such as stereo equipment, and for connecting semiconductor elements in an integrated circuit.

Applicants' amended independent claim 32 is directed to a method for producing a metal wire for reinforcing an elastomeric material, "the metal wire comprising a metal core comprising steel; and a metal coating layer comprising brass having a crystalline structure consisting of α face-centered-cubic brass; . . . wherein the method comprises: . . . depositing a metal coating layer on the metal core; . . . wherein the metal coating layer is deposited on the metal core . . . using a plasma deposition technique . . ."

Gerspacher and Sawada fail to disclose or render obvious at least this subject matter recited in independent claim 32.

Exemplary embodiments disclosed in the present application may result in one or more of the following desired achievements in a method for manufacturing a metal wire for reinforcing an elastomeric material: a faster coating method; improved mechanical resistance of the wire; improved drawing properties of the wire; reduced occurrence of removal of coating during wire drawing; improved crystalline structure; improved corrosion resistance of wire; and improved adhesion of coated wire to elastomeric materials.

As outlined in the originally-filed description at page 5, lines 16-23, plasma deposition on a steel core of brass may facilitate achievement of a deformable crystalline structure of the brass coating having improved drawing and adhesion properties. For example, the brass layer comprising brass having a crystalline structure consisting of α face-centered-cubic brass may exhibit enhanced deformability, thus improving the subsequent drawing of the wire. In contrast and as outlined on page 2,

lines 23-30, and page 5, lines 16-24, of the originally-filed description, formation of β -brass crystalline structure coating may result in degraded drawing properties of the wire that may cause removal of a portion of the brass coating. Since corrosion of the wire may occur in areas where the brass coating is absent, by preventing or reducing such areas, corrosion resistance of the wire may be enhanced. In turn, reducing corrosion may result in improved mechanical characteristics of the wire (e.g., resistance to failure and improved adhesion of the wire to elastomeric materials). Neither Gerspacher nor Sawada discloses or renders obvious the subject recited in independent claim 32 that relates to these exemplary aspects.

For at least these reasons, Gerspacher and Sawada, regardless of whether they are viewed individually or as a whole, fail to disclose or render obvious all of the subject matter recited in Applicants' independent claim 32. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of independent claim 32 under 35 U.S.C. § 103(a) based on Gerspacher and Sawada.

In addition to the above-outlined reasons, Applicants continue to traverse the § 103(a) rejection of independent claim 32 because the proposed combination of the Gerspacher and Sawada references fails to support a *prima facie* case of obviousness that satisfies either the Graham factual inquiries or the standard for *prima facie* obviousness set forth in the M.P.E.P. See §§ 2141-2143. In particular, Applicants respectfully submit that Gerspacher teaches away from the rejection statement's proposed, hypothetical modification to Gerspacher based on Sawada, and further, that an ordinary artisan in Gerspacher's art relating to wire reinforcement of tires would not look to Sawada's art relating to high quality electrical conductors for use in magnetic

coils, acoustic- and image-forming appliances, and for connecting semiconductor elements in an integrated circuit.

In the final Office Action, the rejection statement concedes that “Gerspacher uses an electroplating process for obtaining adhesion of a coating to the core” rather than “the coating material [being] deposited on the on the metal core . . . using a plasma deposition technique,” as recited in independent claim 32. Final Office Action at 3. The rejection statement asserts, however, that “it would have been obvious to . . . have modified Gerspacher’s coating process by using a plasma or sputtering deposition process,” purportedly because Sawada shows a plasma deposition process to “facilitate greater adhesion advantages.” Id.

Applicants respectfully disagree with the rejection statement’s assertion. Rather than disclosing “a plasma or sputtering deposition process,” Gerspacher discloses a process for making rubber-adherable wire for reinforcing rubber articles, such as tires, using an electroplating process. Indeed, Gerspacher discloses that “[t]he present invention is directed specifically toward control of surface oxide layer during the plating and drawing process.” (Col. 1, lines 29-31 (emphasis added).) In other words, Gerspacher’s invention is to reduce the creation of an oxide layer during an electroplating process. Thus, Gerspacher’s teachings relate to improving a process for electroplating brass onto steel wire, and modifying those teachings by replacing the electroplating process with Sawada’s deposition coating technique would result in changing the principle disclosed in Gerspacher. Thus, Gerspacher teaches away from substituting “a plasma or sputtering deposition process” for the “preferred” electroplating process that is Gerspacher’s disclosed “invention.” For at least this reason, it would not

have been obvious to modify the Gerspacher reference's process for making zinc-coated steel wire for reinforcing tires based on Sawada's disclosure.

In the "Response to Applicants' Comments" section of the final Office Action, the Examiner asserts that "the skilled artisan having the benefit of Sawada's teaching where vapor phase coating is advantageous over 'other coating methods' would have been motivated to have modified Gerspacher's 'other coating method' of electrodeposition by using a vapor phase coating method." Final Office Action at 6.

Applicants respectfully disagree with the assertion. Applicants note that Gerspacher relates to coating a steel wire with zinc. In contrast, Sawada relates to coating a metal wire with the same metal material. This is one more reason that a person skilled in the art would not replace Gerspacher's "invention . . . directed specifically toward control of surface oxide layer during the plating and drawing process" (col. 1, lines 29-31) with Sawada's vapor deposition process for depositing steel on a steel wire. For a least these reasons, an ordinary artisan would not have arrived at Applicants' claimed subject matter, regardless of whether the artisan viewed Gerspacher and Sawada individually or as a whole.

In addition to teaching away from the rejection statement's proposed, hypothetical modification to Gerspacher's disclosed process, Applicants continue to respectfully submit that the rejection statement's proposed modification is improper under § 103(a), because a person having ordinary skill in Gerspacher's art relating to processes for making wire for reinforcing tires would not have looked to Sawada's disclosure relating to processes for making high quality electrical conductor for use in

winding magnet coils, acoustic- and image-forming appliances, and for connecting semiconductor elements in integrated circuits.

According to the M.P.E.P., if a reference is not one which, because of the matter with which it deals, logically would have commanded itself to an inventor's attention in considering his or her invention as a whole, the reference is non-analogous art.

§ 2141.01(a). Moreover, if a reference is non-analogous art, it cannot be relied on a claim rejection under 35 U.S.C. § 103(a). Id.

Applicants respectfully submit that there is no reason an ordinary artisan skilled in Gerspacher's art relating to processes for making wire for reinforcing tires would reasonably be expected to look to the art of making high quality electric conductors for audio devices and integrated circuits. Indeed, Gerspacher is concerned with the problem of improving the adhesion between the wire and the elastomeric material of tires, and to that end, with improving electroplating processes for coating a steel wire with brass. In contrast, Sawada is concerned primarily with the problem of improving the quality and reliability of an electrical conductor, along with reducing the diameter of the electrical conductor, including coating a core wire with a coating of the same kind of material (e.g., coating a copper core wire with a copper coating) using a vapor deposition method. Thus, it is not reasonable to expect that an artisan in Gerspacher's field of reinforcing wires for tires would look to Sawada's electrical conductor field to solve a problem purportedly known in Gerspacher's field. Thus, Sawada is non-analogous art. For at least this additional reason, the Gerspacher and Sawada references, when viewed as a whole, do not render Applicants' independent claim 32 *prima facie* obvious.

In the "Response to Applicants' Comments" section, the Examiner asserts that "the fields of endeavor [of Gerspacher and Sawada] overlap and are clearly ones that the skilled artisan would have been expected to look, . . . because the skilled artisan working in the wire treatment field would clearly have been expected to look to wire processing whether the wire is ultimately used in differing fields." Final Office Action at 5.

Applicants respectfully disagree with the assertion, at least because Gerspacher relates to the technical area of reinforcing rubber articles such as tires with zinc-coated steel wire, and Sawada relates to the technical area of providing electrical conductors for acoustic and image-forming appliances formed from a metal coated with the same metal. Due at least to the divergent nature of the particular desired characteristics of these unrelated end products, an artisan skilled in Gerspacher's field of reinforcing rubber tires would not have been expected to look in Sawada's field of electrical conductors, regardless of any purported "overlap" of wire treating.

For at least the above-outlined reasons, the final Office Action has failed to establish that Applicants' independent claim 32 is *prima facie* obvious. Therefore, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of independent claim 32 based on Gerspacher and Sawada.

V. Rejection of Dependent Claims

Dependent claims 33-46, 48, 50-59, and 61 (claims 47, 49, 60, and 62 have been canceled) were rejected under 35 U.S.C. § 103(a) based on Gerspacher in combination with Sawada. Each of claims 33-46, 48, 50-59, and 61 depends from independent claim 32, so they should be patentably distinguishable from Gerspacher and Sawada for at least the same reasons as independent claim 32. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection dependent claims 33-46, 48, 50-59, and 61 under 35 U.S.C. § 103(a) based on Gerspacher and Sawada.

VI. Conclusion

As outlined above, independent claim 32 should be allowable. Dependent claims 33-46, 48, 50-59, and 61 depend from allowable independent claim 32. Therefore, each of those dependent claims should be allowable for the same reasons independent claim 32 is allowable, as well as by virtue of their recitations of additional novel and non-obvious subject matter.

Applicants respectfully request reconsideration of this application, withdrawal of the outstanding claim rejections, and allowance of claims 32-46, 48, 50-59, and 61.

If the Examiner believes that a telephone conversation might advance prosecution, the Examiner is cordially invited to call Applicants' undersigned attorney at (404) 653-6559.

Applicants respectfully submit that the final Office Action contains a number of assertions concerning the related art and the claims. Regardless of whether those

assertions are addressed specifically herein, Applicants respectfully decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account 6-0916.

Respectfully submitted,

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